OUTDOOR SAUNA SERIES

Installation and Operating Instructions

Finnleo® NorthStar Outdoor 46

Finnleo® NorthStar Outdoor 56

Finnleo® NorthStar Outdoor 57

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Sauna360 congratulates you on your decision to enjoy the finest sauna available...

Welcome to the growing family of finnleo® sauna owners.

Before you begin reviewing the manual, please take a moment to register your warranty. Doing so will assist us in contacting you for any important notification.

Prior to registering, you will need the serial number(s) located on the equipment.

To register, please go to https://www.finnleo.com/warranty-registration

FOR YOUR RECORDS

Sauna Room Model/Serial Number: _____

Heater Model/Serial Number: _____

Control Model/Serial Number: _____

Contactor Box Model/Serial Number: _____

Date Purchased: _____

Dealer: _____

Address: _____

Phone Number: _____

Website/Email: _____

If questions arise regarding this product or this manual, please contact your authorized *finnleo* dealership. They are trained professionals who are familiar with the product as well as new sauna ownership concerns. Their expertise will facilitate the enjoyment of your new ***finnleo*** sauna.

IMPORTANT: SAUNA360 reserves the right to change specifications or design without notification and without incurring any obligation.

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SECTION 1. BEFORE YOU BEGIN

This manual is for installation and operation of a Finnleo® NorthStar outdoor sauna with Designer heater (Designer 4.5 | Designer 6.0) mated with an SL2 control (1601-38) and CB 16-1 (1201-16-1) | CB 16-3 (1201-16-3) contactor (CB) box.

NorthStar OD 46, **NorthStar OD 56,** **Or,** **NorthStar OD 57**	**Designer Heater** (Designer 4.5 | Designer 6.0)	**SL2 Control** (1601-38)	**CB Box** CB 16-1 (1201-16-1) | CB 16-3 (1201-16-3)

Figure 1.

Use these instructions when assembling the NorthStar outdoor sauna. For best results and for protection of product warranty, please read, understand and follow all safety information, safety placards, and installation and operating instructions prior to starting the installation process. When completed, leave these instructions with the owner.

If questions arise regarding this product or this manual, please contact your authorized *finnleo* dealership. They are trained professionals who are familiar with the product as well as new sauna ownership concerns. Their expertise will facilitate the enjoyment of your new ***finnleo*** sauna.

SECTION 2. SAFETY INFORMATION

2.1. CONSTRUCTION and INSTALLATION SAFETY

WARNING - ELECTRIC SHOCK HAZARD: High voltage exists within this equipment. There are no user-serviceable parts within this equipment. Have the equipment installed and serviced only by qualified and licensed personnel in accordance with local and national codes.

WARNING - ELECTRIC SHOCK HAZARD: DO NOT install electrical receptacles inside the sauna room.

WARNING: If installing a fire sprinkler system inside the sauna room, ensure it is properly rated for sauna room temperatures.

CAUTION: During assembly, observe all recommended minimum safe distances between the heater and combustible materials. Recheck all measurements to verify minimum safe distances are maintained.

CAUTION: When assembly is completed, ensure proper ventilation is provided and airflow is not restricted.

CAUTION: Loose electrical connections can cause heat damage to wires, terminal blocks and other components. Improper connections may void product warranty. Ensure all electrical connections are installed and inspected by qualified and licensed personnel.

IMPORTANT: The door to the sauna room must open outward, to the exterior of the sauna room.

IMPORTANT: DO NOT install a lock or mechanical locking device onto the door of the sauna room. If needed, use only a magnetic or spring-loaded catch mechanism that allows the door to open when pressed or pulled.

IMPORTANT: To prevent electrical shock, provide adequate electrical grounding to the electrical receptacle.

IMPORTANT: Do not install a shower in the sauna room.

NOTE: Use only approved sauna room materials for interior construction of the sauna room. Installation of unapproved materials or accessories may void product warranty

NOTE: To protect product warranty, only qualified licensed personnel should perform installation and service to this equipment.

NOTE: A GFCI (Ground-Fault Circuit Interrupter) device is not required by NEC. Only install a GFCI if required by local codes, however, be aware this will cause nuisance electrical circuit trips during use of the product.

2.2. USER and OPERATIONAL SAFETY

WARNING: Prolonged exposure to elevated temperatures can induce hyperthermia. Hyperthermia occurs when internal body temperature reaches several degrees above normal (98.6°F). Symptoms of hyperthermia include an increase in body temperature, dizziness, lethargy, drowsiness, and fainting. Effects of hyperthermia include failure to perceive heat, failure to recognize the need to exit the room, unawareness of impending hazard, fetal damage in pregnant women, physical inability to exit the room and unconsciousness.

WARNING: DO NOT take a sauna if using alcohol, recreational drugs, or prescribed medication as these may greatly increase risk of hyperthermia, personal injury or death.

WARNING - FIRE HAZARD: DO NOT use the sauna room for drying clothes, bathing suits, towels, etc. **DO NOT** hang towels above heater or place objects onto the sauna heater. Only place rocks supplied with the heater onto the heating elements. **DO NOT** place combustible materials onto the sauna heater.

WARNING - FIRE HAZARD: IMMEDIATELY DISCONTINUE using the sauna if the walls or ceiling exhibit unusual discoloration and/or darken in color.

WARNING - HOT SURFACES: The heater is extremely hot during operation. Keep hair, head, hands, body, and appendages on the safe side of guard rails. Keep children and vulnerable individuals a safe distance away from the heater. **DO NOT TOUCH** the heater while in operation as severe burns to skin may result.

WARNING - CORROSIVE: DO NOT pour chlorinated pool or spa water onto the heater as corrosion will occur and void product warranty.

WARNING: DO NOT pour excessive water onto the heater as damage may occur and void product warranty.

IMPORTANT: If pregnant or a person in poor health, consult with a physician before using sauna.

IMPORTANT: DO NOT exercise, play or roughhouse while using the sauna. Be safe and respectful of everyone.

IMPORTANT: Keep children, minors, and vulnerable individuals a safe distance away from a warming or hot sauna heater. Be a responsible sauna user. When needed, provide operating instructions to those less experienced. Keep operation of the sauna safe for yourself and others to enjoy.

NOTE: Inspect the sauna regularly. Check for maintenance of the heater, control, and benches. Replace wood surfaces should any show signs of deterioration.

SECTION 3. INSTALLATION REQUIREMENTS

To ensure safe use of the sauna room, verify the following criteria are met:

- Install this sauna room on a solid, flat, level surface that will support the combined weight of the sauna room and maximum occupant capacity. The manufacturer recommends a flat, level concrete pad of appropriate thickness (consult with local building codes), or equivalent platform, that will support the entire floor area of the sauna room.
- Maintain a clearance of 24 inches (minimum) from structures and greenery (i.e. trees, shrubs). Consult local building codes for further clearances that may apply.

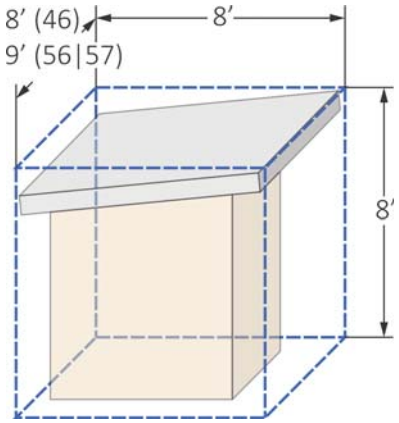


Figure 2. Sauna Room Area

- Consult local building codes for approved anchoring methods and materials.
- At least three (3) adults are required for the assembly and installation of the sauna room.
- Ensure all electrical wiring is installed in accordance with NEC, state, and local codes. Installation of high-voltage wiring must be completed by a licensed Electrician.
- The sauna room is designed to operate on 240 Volts AC single phase power.
- Install electrical wire that is rated appropriately to meet or exceed the *Maximum Current Load* from the electrical panel to the contactor (CB) box of the sauna room.

Room	Heater Model	KW	Maximum Current Load	Minimum Wire Rating From Power Supply to CB Box	Minimum Wire Rating From CB Box to Heater
NorthStar Outdoor 46	Designer 4.5	4.5	18.8 Amp	#2 10AWG +Gr	#2 10AWG +Gr
NorthStar Outdoor 56	Designer 6.0	6.0	25 Amp	#2 10AWG +Gr	#2 10AWG +Gr
NorthStar Outdoor 57	Designer 6.0	6.0	25 Amp	#2 10AWG +Gr	#2 10AWG +Gr

- A dedicated 240 VAC circuit is recommended to avoid unnecessary tripping of the assigned circuit breaker.
- Ensure the circuit breaker is rated to *ONLY* meet the design limit of the *Maximum Current Load*. Do not install an oversized/over-rated circuit breaker. Do not exceed the safety rating of the *Maximum Current Load*.
- Provide adequate grounding from the electrical supply panel to the CB box.

IMPORTANT: The **EXTERIOR WOOD** surfaces of this sauna room require adequate coatings of primer and a desired paint color or stain and clear UV resistant finish to protect the exposed wood from weather and elements of the environment. **DO NOT** apply paint, stain, or other finish coatings onto the interior wood surfaces.

- When installation is complete, ensure the inlet and exhaust vents are open and free from blockage and obstructions.

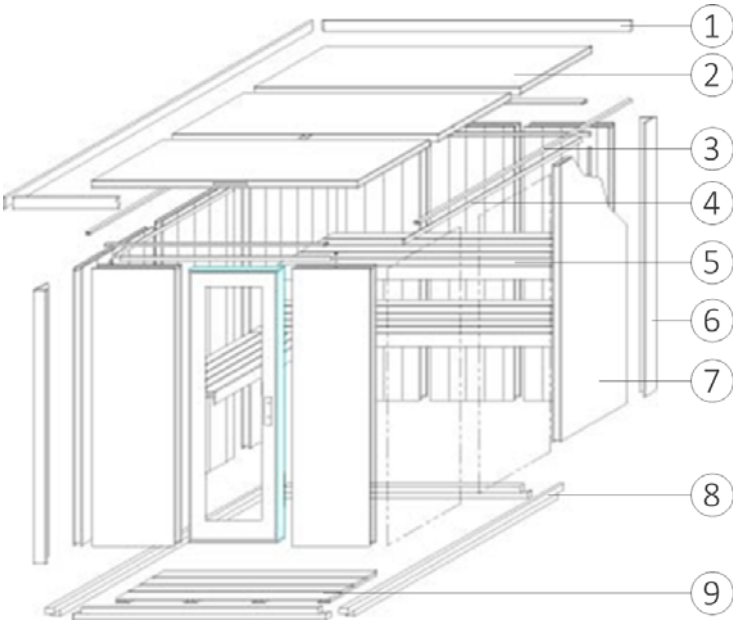
SECTION 4. PART LIST and TOOL REQUIREMENTS

PART LIST

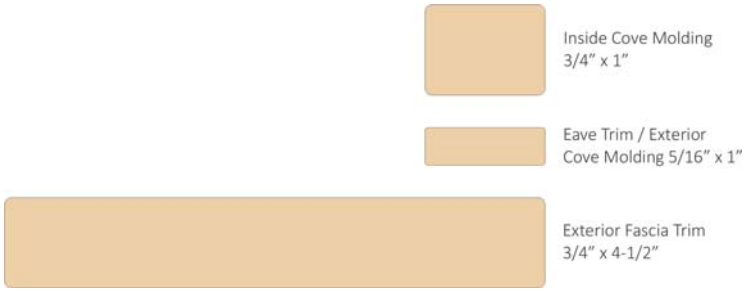
Before starting the assembly process, inspect packaging and verify contents. The hardware package with each room includes a T20 Torx bit.

4.1. NorthStar OD 46 Parts List

Itm No.	Description	QTY
1	Fascia Trim	
2	Ceiling Panel	
3	Top Plate	
4	Interior Cove	
5	Benches	
6	Exterior Corner Trim	
7	Wall Panel	
8	Base Floor	
9	Duck Board Floor	
10		
11		
12		
13		
14		
15		
16		
	Hardware Package	1



Trim Profiles



RECOMMENDED TOOLS

- Box knife
- #2 Phillips Head Screw Driver
- T10, T15, and T20 Torx Drive
- 1/4” Hex Head Magnetic Socket
- Bubble Level
- Two (2) Glass Lifting Suction Cups
- Roll of Blue Painter’s Tape
- Tin Snips
- 5” Hand Seamer
- 2.8 oz. Squeeze Tube of Silicone Door and Window Sealant
- Pneumatic Brad Nailer (16/18 Gage)
- Package of 16 gage x 2” nails
- Package of 18 gage X 1 ½” nails.
- Miter Saw/Circular Saw
- Jigsaw
- Non-Marring Rubber Mallet
- Step Ladder
- Tape Measure, Straight Edge/Square
- 1/8” Metal-Cutting Drill Bit
- Drill
- Pencil, String/Chalk Line
- Stapler and Roofing Staples

SECTION 5. SAUNA ROOM ASSEMBLY

Use these instructions for assembling a NorthStar Outdoor 46, NorthStar Outdoor 56 and NorthStar Outdoor 57 Traditional sauna room. For ease of illustration, instructions are written for the NorthStar Outdoor 46 |56 sauna room(s).

LAYING THE FLOOR PANEL

1. Place the floor panel on a flat, level surface, ***at least*** 24 inches away from adjacent walls. Consult local building codes as actual distance and safety requirements may vary.
2. Orient the "#1" printed on the base rail as the right-front wall.
3. **Using a bubble level, check the floor panel for level. If necessary, use wooden shims beneath the floor panel to make level.**
4. Anchor the floor to the pad/platform on which it rests. Consult local building codes for approved anchoring methods and materials.

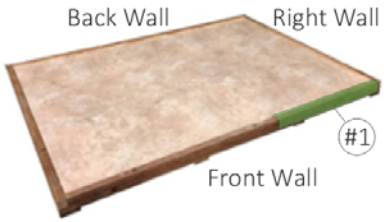


Figure 3. Laying the Floor Panel

INSTALLING WALLS #1 and #2

5. Place wall #1 onto the base rail labeled #1.
6. Hold wall #1 upright while wall #2 is placed.
7. Place wall #2 onto the base rail labeled #2.
8. Using three (3) 3" Torx head screws, attach the edge of the wall #1 corner stud to the wall #2 corner stud.

Figure 4. Installing Walls #1 and #2

Figure 5. Attaching Wall #1 to Wall #2

INSTALLING WALL #3

9. Place wall #3 onto the base rail section labeled #3.
10. Fit together the edge tongue and grooves of wall #3 with the tongue and grooves of wall #2.
11. Using one (1) 3” Torx head screw, toenail the top corner of wall #3 to wall #2.

Figure 6. Toe-Nailing Example

Figure 7. Installing Wall #3

INSTALLING WALL #4

12. Place wall #4 wall onto the base rail section labeled #4.
13. Align and fit the corner of wall #4 with the corner of wall #3.
14. Using three (3) 3” Torx head screws, attach the edge of wall #3 corner stud to the edge of wall #4 corner stud.

Figure 8. Installing Wall #4

INSTALLING WALL #5

15. Place wall #5 onto the base rail section labeled #5.
16. Fit together the edge tongue and grooves of wall #5 with the tongue and grooves of wall #4.
17. Using one (1) 3” Torx head screw, toenail the top corner of wall #5 to wall #4.

Figure 9. Installing Wall #5

INSTALLING WALL #6

18. Place wall #6 onto the base rail labeled #6.
19. Fit together the edge tongue and grooves of wall #6 with tongue and grooves of wall #5.
20. Using one (1) 3” Torx head screw, toe-nail the top corner of wall #6 to wall #5.

Figure 10. Installing Wall #6

INSTALLING WALL #7

21. Place wall #7 onto the base rail labeled #7.
22. Align and fit the corner of wall #7 with the corner of wall #6.
23. Using three (3) 3” Torx head screws, attach the edge of wall #6 corner stud to the edge of wall #7 corner stud.

Figure 11. Installing Wall #7

INSTALLING WALL #8

24. Place wall #8 onto the base rail labeled #8.
25. Fit together the edge tongue and grooves of wall #8 with tongue and grooves of wall #7.
26. Using one (1) 3” Torx head screw, toe-nail the top corner of wall #8 to wall #7.

Figure 12. Installing Wall #8

INSTALLING DOOR PANEL ASSEMBLY (WALL #10)

27. Place wall #10 onto the base rail labeled #10.
28. Fit together the edge tongue and grooves of wall #10 with tongue and grooves of wall #1.
29. Using one (1) 3” Torx head screw, toe-nail the top corner of wall #10 to wall #1.

Figure 13. Installing Door Panel Assembly (Wall #10)

INSTALLING WALL #9

30. Place wall #9 onto the base rail labeled #9.
31. Fit together the edge tongue and grooves of wall #9 with tongue and grooves of wall #10.
32. Using one (1) 3” Torx head screw, toe-nail the top corner of wall #10 to wall #9.
33. Align and fit the corner of wall #9 with the corner of wall #8.
34. Using three (3) 3” Torx head screws, attach the edge of wall #9 corner stud to the edge of wall #8 corner stud.

Figure 14. Installing Wall #9

INSTALLING TOP PLATES

35. On the front and back top plates, orient the notched ends face up.
36. Place the front and back top plates across the front and back wall sections.
37. On the left and right top plates, orient the notched ends face down.
38. Place the left and right top plates across the left and right wall sections.
39. Fit the overlapping notched ends together.
40. Using one (1) 2” Torx head screw at each corner, attach the overlapped top plates to the top wall corners.
41. Using one (1) 2” Torx head screw at each wall mid-section, attach the top plates to the middle of each wall section.

Figure 15. Installing Top Plates

INSTALLING EXTERIOR CORNER TRIM

42. Match the numbered exterior corner trim with the numbers on the exposed wall corners.

43. Align and fit the tongue of the edge on the corner trim with the grove on the edge of the exterior wall.

44. Press and hold the corner trim in place.

45. Use appropriate sized brad/finishing nails to attach the corner trim. Also use 3” Torx head screws to firmly secure the trim in place.

NOTE: Twisting occurs naturally for some species of open-cell wood. Variations in grain density, changes in humidity, moisture on/in the wood, and changes in the weather all contribute to the effect. Twisting is particularly troublesome when installing wood trim. Suggestions are provided in “SECTION 6. MANAGING TWISTED CORNER TRIM” on page 23.

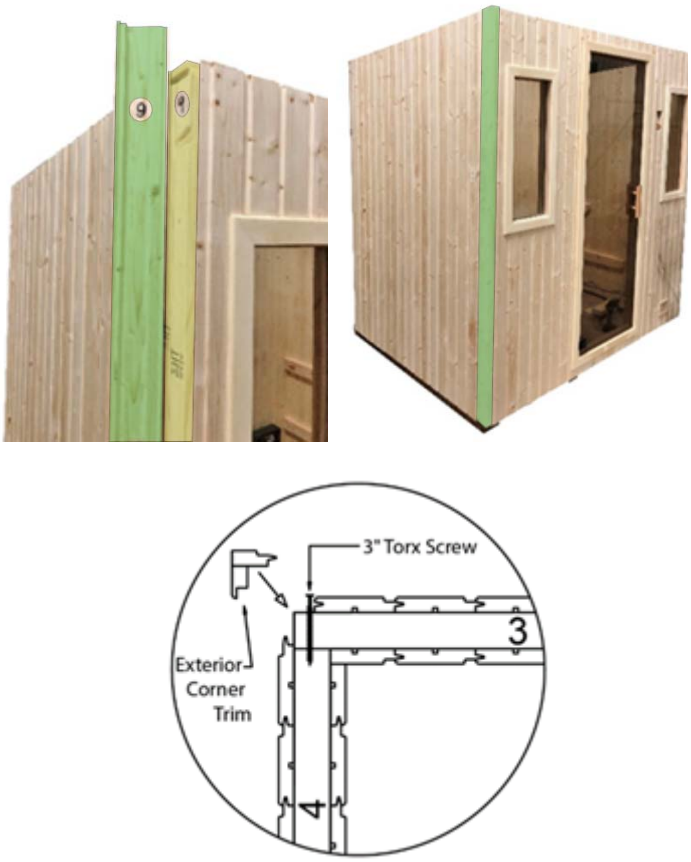


Figure 16. Installing Exterior Corner Trim

INSTALLING LOWER BENCH SUPPORTS

46. On the right wall, locate the pencil marks identified on the red colored “Lower Bench Support” label.

47. Place the lower right bench support between the pencil marks.

48. Using four (4) 3” Torx head screws, attach the lower left and right bench supports through the pre-drilled holes on the walls.

Figure 17. Installing Lower Bench Supports

ATTACHING WALLS TO BASE RAILS

49. At the pocket opening on each wall section, use a 3” Torx head screw to attach the wall to the base rail.

50. Install covers over the pocket openings and use finish nails/ braids to secure them.

Figure 18.

INSTALLING DOOR HANDLE

51. Arrange the door handles and hardware as shown in Figure 19. Screws and caps are installed from inside the door.

52. Place the door handles on either side of the glass door, aligning with the holes in the glass.

53. Install the spacers into the holes in the glass.

54. Using the two (2) M4 x 100mm Phillips head screws included in the kit, attach the door handles to the glass door.

    NOTE: Install screws by hand with a screw driver DO NOT USE a power tool.

55. Install the caps into the ends of the handle screw holes.

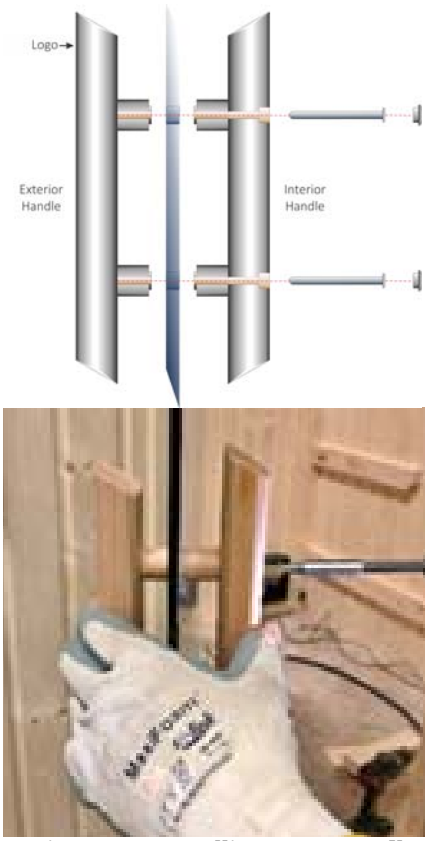


Figure 19. Installing Door Handle

INSTALLING CONTACTOR (CB) BOX

56. Remove the cover of the CB Box to gain access to the four (4) mounting holes located in the back of the box.

57. Set the hardware and cover aside in a safe location.

58. Using two (2) pieces of scrap 2 x 4 lumber as spacers, position the CB Box into the corner of the back-right (#4) wall.

    NOTE: If the mounting holes of the CB box align with a grove in the wall, move the box left or right to align the holes with a solid portion of the plank.

Figure 20. Aligning the CB Box

59. Using the four (4) 3/16” x 3/4” screws supplied with the kit, attach the CB Box to the wall.

Figure 21. Attaching the CB Box

INSTALLING CABLE TRACK

60. Orient the cable track with the slot facing up.

61. Peel off the protective paper from the adhesive strip located on the backside of the cable track.

62. Apply the sticky side of the cable track along the bottom edge of the #2 and #3 walls.

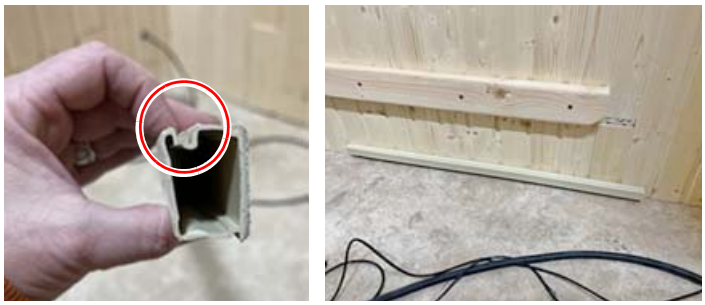


Figure 22. Orienting and Installing Cable Track

ROUTING CABLES

63. Route the heater power cable into the cable track.

64. Route the temperature sensor cable and control cable into the cable track on top of the power cable.

65. Starting from one end of the cable track, snap the edge of the cover into the receiving slot, sealing the cable track closed as you progress towards the other end of the track.

Figure 23. Routing Cables

CONNECTING CABLES

For reasons of safety, this manual does not include the complete steps for electrical installation of the heater.

Electrical installation must be made by a licensed Electrician in accordance with the National Electric Code and local regulations.

66. Prepare the heater and cables for installation. See the appropriate ***Traditional Sauna Heater Installation and Operating Instructions*** for details.

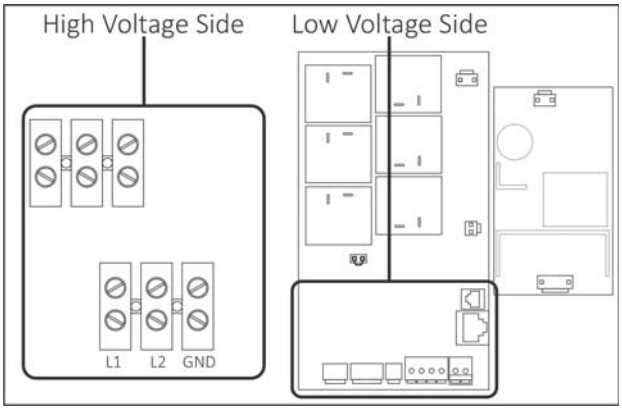


Figure 24. CB Box Internal View

67. Route the Heater cable through a bottom opening located on the ***High Voltage Side*** of the CB box.

68. Secure the heater cable with an appropriate strain relief.

69. Connect the heater cable to the upper terminal block per Heater manual instructions.

70. Route the power supply cable through another opening in the bottom on the ***High Voltage Side*** of the CB box.

71. Secure the power cable with an appropriate strain relief.

72. Connect the power cable to the lower terminal block per the Heater manual instructions.

73. Route low voltage cables through bottom openings located on the ***Low Voltage Side*** of the CB box.

Figure 25. Connecting Cables

INSTALLING the ROOF

74. Apply 1/2” wide weather stripping across the top edge of all four walls.

HEAVY OBJECT: A minimum of two people are required when lifting roof sections into place.

NOTE: The 4 x 6 and 5 x 6 rooms have a two-panel roof system. The 5 x 7 room has a three-panel roof system. In this manual, instructions are written for the two-panel system, however, installing the three-panel is the same process.

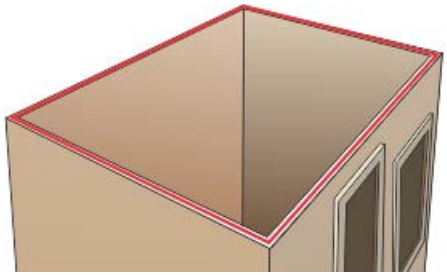


Figure 26. Applying Weather Stripping

75. Place the ***Right*** roof panel on top of the room, aligning the guide strip over the edge of the Front wall.

76. Place the ***Left*** (and ***Center*** for 5 x 7) roof panel(s) on top of the room, aligning the guide strip(s) over the edge of the Front wall.

Figure 27. Placing the Right Roof Panel

77. Using 3” Torx head screws, toe nail the edge of the roof panels together.

78. After the roof panels are attached together, center the roof assembly over the room, measuring to make the soffit reveal equal on both the left and right sides.

79. Measure where the four corners of the room align with the roof and attach the roof using 5” Torx head screws.

80. Press a straight edge against adjoining walls near the top to align and straighten the walls.

81. On either side of the butt joint between walls, use a 5” Torx head screw to attach each wall to the roof.

82. Repeat the above two (2) steps for the front, left, right and back walls.

83. After the roof panels are attached to the walls, remove the guide strips.

Figure 28. Toe Nailing Roof Panels Together

Figure 29. Attaching the Roof

INSTALLING WOOD FASCIA

CAUTION: Ensure that you have assistance to hold the fascia boards in place while nailing.

NOTE: Test fit all fascia prior to installation. It might be necessary to measure, mark, and cut fascia for a precise fit.

84. Using 2” 16 gage or equivalent finish nails or wood screws, Attach the fascia to the ***Back*** edge of the roof.

85. Using 2” 16 gage or equivalent finish nails or wood screws, Attach the fascia to the ***Right*** edge of the roof.

86. Using 2” 16 gage or equivalent finish nails or wood screws, Attach the fascia to the ***Left*** edge of the roof.

87. Using 2” 16 gage or equivalent finish nails or wood screws, Attach the fascia to the ***Front*** edge of the roof.

NOTE: Metal fascia and roofing is installed as a later part of this procedure. See “SECTION 7. INSTALLING METAL FASCIA and ROOFING” on page 24.

Figure 30. Installing Back Wood Fascia

Figure 31. Installing Front Wood Fascia

INSTALLING SOFFIT TRIM

NOTE: Measure, mark, and cut soffit trim to length prior to installation.

88. Cut the ***Back*** soffit trim so the ends are flush with the back of the left and right fascia boards.
89. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Back*** soffit trim beneath where the soffit meets the back fascia.
90. Cut the ***Front*** soffit trim so the ends are flush with the back of the left and right fascia boards.
91. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Front*** soffit trim beneath where the soffit meets the front fascia.
92. Cut the ***Left*** and ***Right*** soffit trim so the ends are flush with the edges of the ***Front*** and ***Back*** soffit trim.
93. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Right*** soffit trim beneath where the soffit meets the right fascia.
94. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Left*** soffit trim beneath where the soffit meets the left fascia.

Figure 32. Measure, Mark and Cut Soffit Trim

Figure 33. Installing Soffit Trim

INSTALLING EXTERIOR COVE TRIM

NOTE: Measure, mark, and cut exterior cove trim to length prior to installation.

95. Cut the ***Left*** and ***Right*** cove trim so the ends are flush with the edges of the ***Front*** and ***Back*** walls.
96. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Right*** exterior cove trim beneath were the walls meet the soffit.
97. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Left*** exterior cove trim beneath were the walls meet the soffit.
98. Cut the ***Front*** and ***Back*** cove trim so the ends are flush with the ends of the ***Left*** and ***Right*** cove trim.
99. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Back*** exterior cove trim beneath where the walls meet the soffit.
100. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Front*** exterior cove trim beneath where the walls meet the soffit.

Figure 34. Installing Exterior Cove Trim

INSTALLING INTERIOR COVE TRIM

NOTE: Measure, mark, and cut interior cove trim to length prior to installation.

101. Cut the ***Left*** and ***Right*** cove trim so the ends are flush to the ***Front*** and ***Back*** walls.

102. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Right*** interior cove trim beneath were the wall meets the ceiling.

103. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Left*** interior cove trim beneath were the wall meets the ceiling.

104. Cut the ***Front*** and ***Back*** cove trim so the ends meet flush with the ends of the ***Left*** and ***Right*** cove trim.

105. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Back*** interior cove trim beneath where the wall meets the ceiling.

106. Using 1 ½" 18 gage finish nails or equivalent, attach the ***Front*** interior cove trim beneath where the wall meets the ceiling.

Figure 35. Installing Interior Cove Trim

INSTALLING UPPER BENCH

107. Carefully bring the upper bench into the sauna room.

108. Place each end of the upper bench onto the upper bench supports.

109. Lean the upper bench up on end and rest against the wall. This will allow more space for installing the lower bench.

NOTE: The 57 room includes a return bench that will attach to the left side of the upper bench.

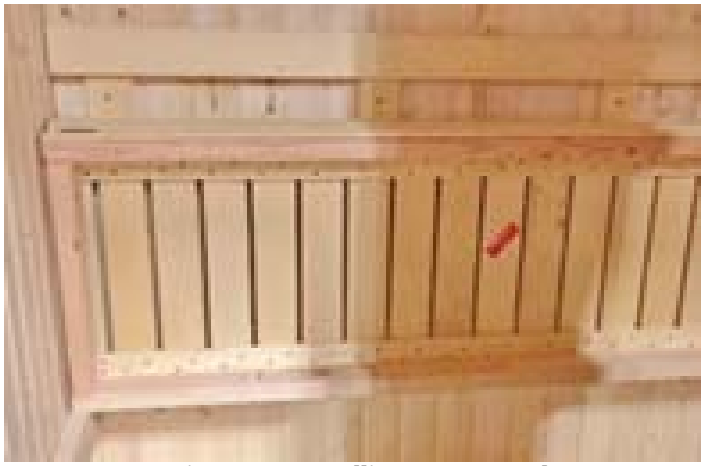


Figure 36. Installing Upper Bench

INSTALLING LOWER BENCH

110. Carefully bring the lower bench into the sauna room.

111. Place each end of the lower bench onto the lower bench supports.

112. Slide the lower bench all the way to the back wall.

NOTE: The top of the CB box may stop the bench from reaching the back wall.

NorthStar 46 |56 NorthStar 57

Figure 37. Installing Lower Bench

INSTALLING RETURN BENCH

NOTE: These steps apply only to the NorthStar 57 sauna room. For the NorthStar 46 and 56 sauna rooms, proceed to instructions on *Installing Backrests*.

113. Bring the return bench into the room. Rest the front edge onto the wall brace and position the rear edge to the front-left edge of the upper bench.

114. Align the seams between the bench planks of the upper bench and return bench.

Figure 38. Installing Return Bench

115. From beneath the return bench, Temporarily use two (2) 2” Torx head screws to hold the rear edge of the return bench to the front right edge of the upper bench.

116. Then drill two (2) 3/8” holes through the rear edge of the return bench and front right edge of the upper bench.

117. Insert two (2) 5” x 3/8” carriage bolts through the holes and permanently attach the upper bench and return bench together using 3/8” hex nuts and washers.

Figure 39. Attaching the Return Bench

118. Place the duck board (floorboard) on floor in front of lower bench.

Figure 40. Placing Duck Board

INSTALLING BACKRESTS

119. Connect the lighting cable from the rear backrest to the corresponding mating cable from the upper back-left corner.

120. For the NorthStar 57 sauna, connect the lighting cable from the return bench backrest to the corresponding mating cable from the upper left-back corner.

121. Using 1-1/2” Torx screws, attach the backrest(s) at the pre-drilled holes (standard height is 20” from top of backrest to top of bench).

122. Install wood caps over the screw holes.

123. Neaten up the cables and tuck into the cable chases behind the backrests.

Rear Backrest

NorthStar 57 Return Bench

Figure 41. Installing Backrests

MOUNTING THE HEATER

The heater will mount on the (#1) front-right wall.

124. Prepare the heater for installation. See the appropriate sauna heater installation and operating instructions manual.

125. Using the measurements provided in Figure 42. verify the position of the pre-drilled mounting holes for the heater.

126. Install the four (4) lag bolts (included with the heater) into the wall for mounting the heater.

127. Leave about 1/4” of the screw shaft exposed for the heater hangers to rest on.

128. Hang the heater onto the four (4) bolts, then tighten the bolts to the wall.

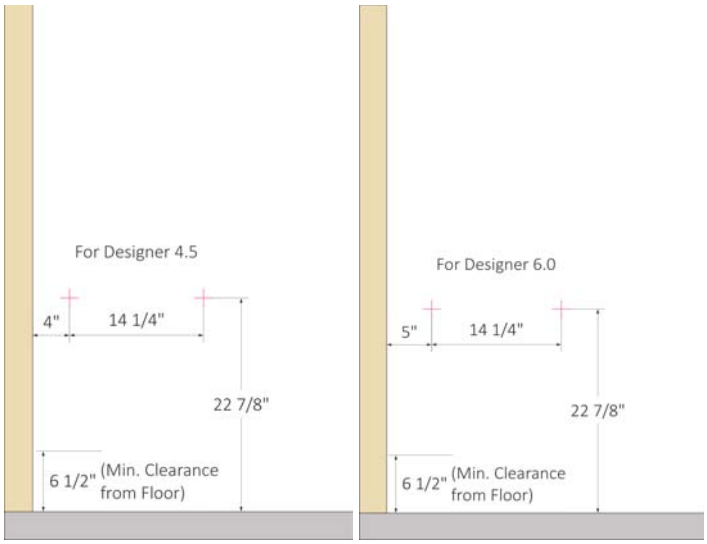


Figure 42. Heater Mounting Measurements

INSTALLING HEATER GUARD

129. Using the screws provided, assemble the wooden heater guard prior to installation.

130. Install the wooden caps over the screw holes.

131. Place one (1) spacing block horizontally on the floor.

132. Stack a second spacing block vertically on top of the horizontal block.

133. Place one end of the heater guard on top of the vertical spacing block and use the 1-1/8” screws provided to attach the heater guard to the wall.

134. Move the spacing blocks to the other end and attach the heater guard to the other wall.

Figure 43. Installing Heater Guard

SECTION 6. MANAGING TWISTED CORNER TRIM

IMPORTANT: The exterior of the NorthStar outdoor sauna requires prime/paint or stain within a few days of installation, and before exposure to rain/snow. **DO NOT** paint or stain the interior.

Twisting occurs naturally for some species of open-cell wood. Variations in grain density, changes in humidity, moisture on/in the wood, and changes in the weather all contribute to the effect. Twisting is particularly troublesome when installing wood trim/corner caps.

- If the corner trim is twisted from one end, begin nailing from the opposite end while a second person holds the trim/corner cap firmly to the wall.

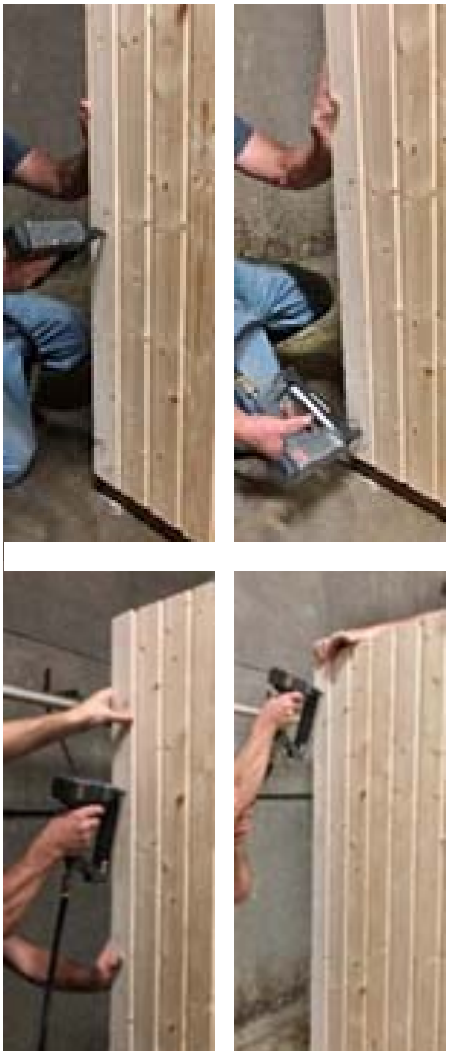


Figure 44. Managing Twisted Corner Trim

MENDING BLEMISHES

Using a putty knife or a wood shim, apply exterior wood filler over nail holes and other minor blemishes and allow to dry. Using a block of wood and 220 grit sandpaper, sand smooth the areas where the wood filler was applied.

Figure 45. Mending Blemishes

SECTION 7. INSTALLING METAL FASCIA and ROOFING

Use the following instructions for preparing and installing metal fascia and roofing onto the outdoor sauna room.

ROOFING MATERIALS

Item #	Description	QTY
1	Felt, Roofing, #15, Plain	80 Sq Ft
2	Roof, Closer, Inside, Pro-Rib, 1” x 3”, Strip	3 pcs
3	Roof, Closer, Outside, Pro-Rib, 1” x 3” Strip	3 pcs
4	Roof, Drip Edge, 3” x 2-1/4” x 10’, Midnight Black	1 pc
5	Roof, Side Fascia, 4-1/8” x 5-1/4” x 10’, Midnight Black	2 pcs
6	Roof, Ridge Cap, 5-3/8” x 5-14” x 10’, Midnight Black	1 pc
7	Roof, Rear, Lower Fascia, 3/4” x 3” x 10’, Midnight Black	1 pc
8	Roof, MTL, Pro-Rib, 36” x 7’, Midnight Black	3 pcs
9	Screw, Sheet metal, #8 x 1-1/4” Star drive, T10, Midnight Black, Pan head	12 pcs
10	Screw, Sheet metal, #10 x 2-1/4” Hex Head, Midnight Black, W/W	40 pcs

NOTE: Spare screws are included with the hardware.

RECOMMENDED TOOLS

- Step Ladder
- Tape Measure, Straight Edge/Square
- 1/8” metal-cutting drill bit.
- Drill, 1/4” Hex Head Magnetic Socket, and T10 Torx Head Drive Bit
- Tin Snips
- Pencil, String/Chalk Line
- Stapler and Roofing Staples

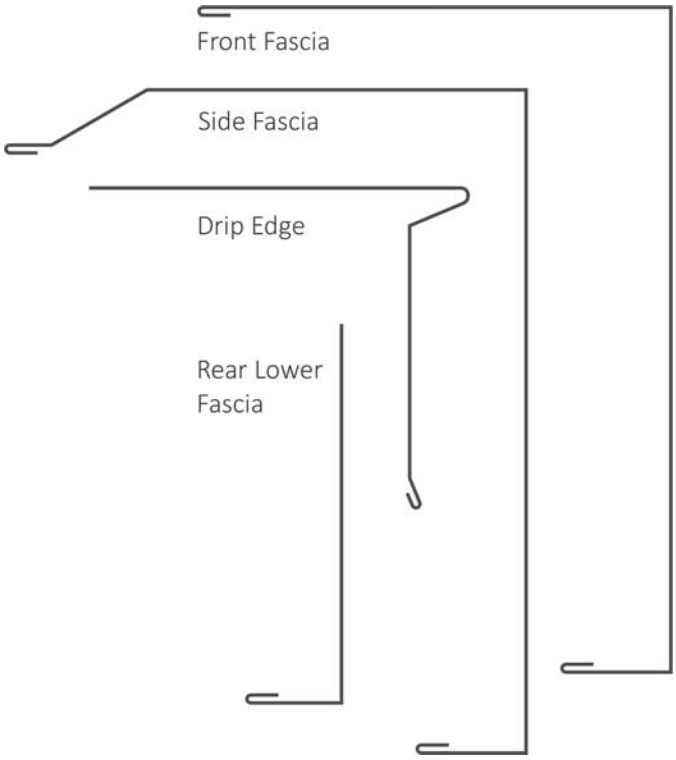


Figure 46. Metal Fascia Profiles

APPLYING WEATHER BARRIER

1. Using a stapler and roofing staples, apply weather barrier onto the wood decking, overlapping the ends onto the front, sides, and back edge fascia.

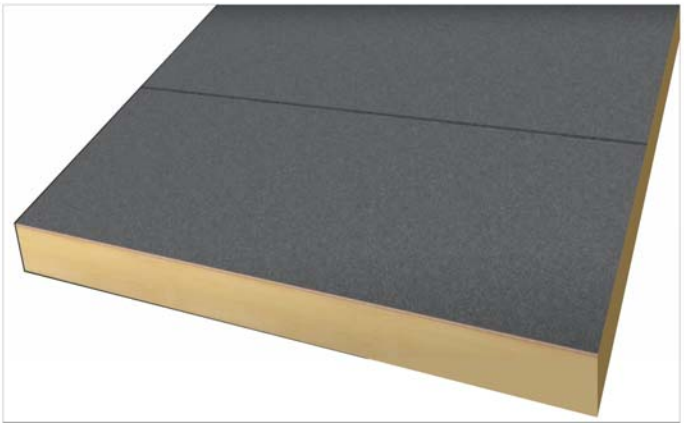


Figure 47. Applying Weather Barrier

APPLYING DRIP EDGE and LOWER REAR FASCIA

2. Pre-fit the drip edge flashing ***over*** the weather barrier and back edge of the wood decking.
3. Using a tin snip, cut and shape/bend the ends of the drip edge flashing to overlap the corners of the wood fascia.
4. From the top surface of the drip edge, use #8 x 1-1/4" T10 pan head screws (or 1-1/4" galvanized nails), spaced accordingly, to attach the flashing to the wood decking.
    - Ensure correct compression of the neoprene washer on each screw. (With the edge of neoprene appearing slightly compressed from the edge of the steel washer).

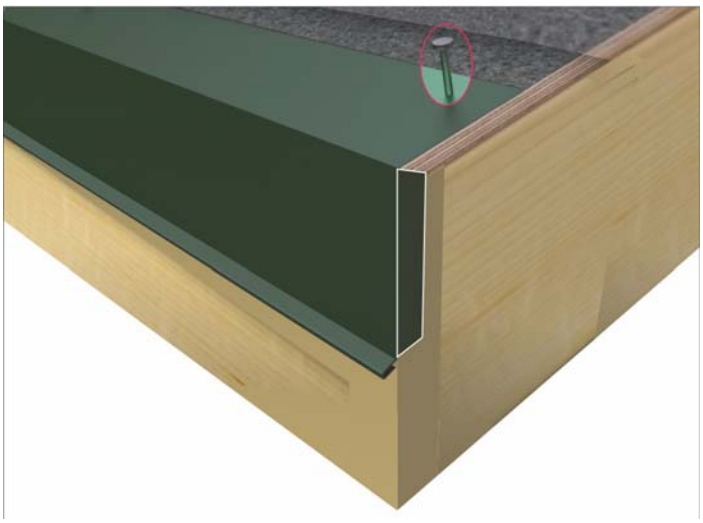


Figure 48. Applying Drip Edge

5. Pre-fit the lower rear fascia beneath the drip edge flashing.
6. Using a tin snip, cut and shape/bend the ends of the lower rear fascia to overlap the corners of wood fascia and to fit beneath the edges of the drip edge flashing.
7. Slide the top edge of the lower rear fascia up under the drip edge flashing and press up to overlap the bottom edge of the wood fascia.
8. Using three (3) #8 x 1-1/4" T10 pan head screws, spaced evenly, attach the bottom overlapped edge of the lower rear fascia to the bottom edge of the wood fascia.

Figure 49. Applying Lower Rear Fascia

APPLYING SHEET METAL ROOFING

9. For the geographic location of where this sauna is installed, lay the metal roof sheets in the direction **TOWARDS** the prevailing winds.
    - Meaning, begin from the opposite end of the roof, moving towards the direction the wind predominately blows ***from*** most of the year.
    - Orient the "trailing (overlap) edge" of the sheet metal in the direction furthest away from the wind.
10. Plan for laying the sheet metal such that the trailing (overlap) edge of each successive panel will overlap the leading edge (purlin bearer leg) of each previous panel.
11. Using a straight edge/square, draw a reference chalk line 1/4" from the edge of the wood deck along the starting (gable) edge of the roof.
12. Remove the paper backing from the self-adhesive tape and apply a strip of polyethylene closure onto the top edge of the drip edge fascia.
13. When laying the first sheet, align the side edge with the reference chalk line.
    - The bottom (back) edge of the roofing sheet should overhang past the back drip edge flashing by 1-inch.
    - The front (top) edge of the roofing sheet will be covered later by the front fascia.

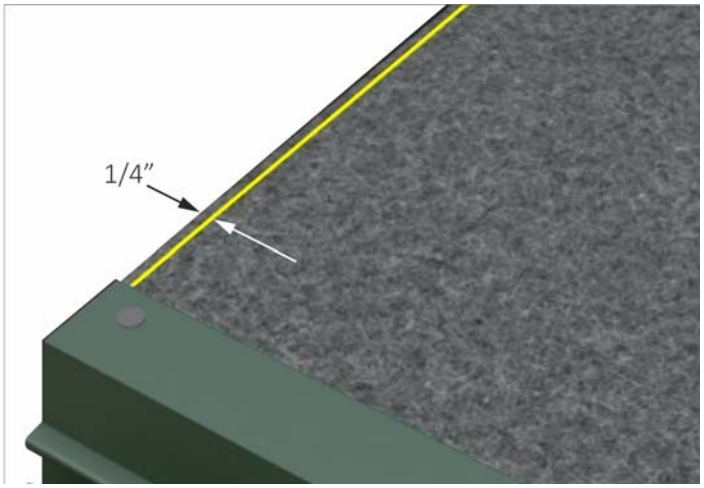


Figure 50. Drawing a Chalk Line

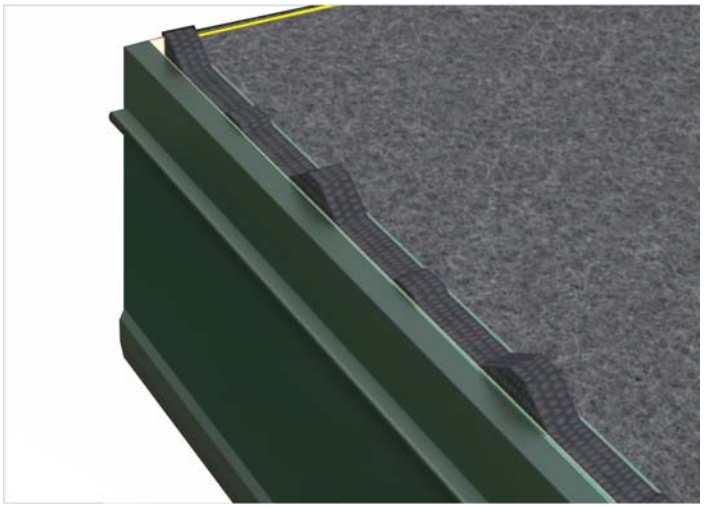


Figure 51. Applying Polyethylene Closure

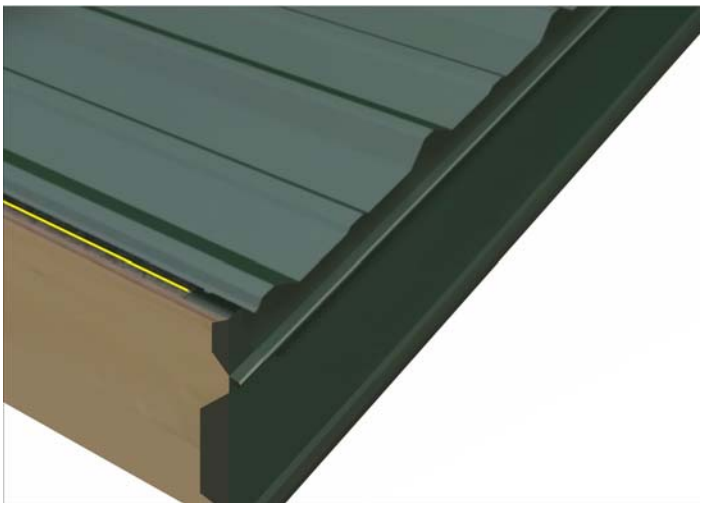


Figure 52. Aligning Edge with Chalk Line

14. Using 2-inch #10 gasketed hex drivescrews, spaced accordingly, attach the metal sheet from the valley (not the crown) onto the wood decking.

    - **TIP:** Using an 1/8" metal drill bit, pre-drill the holes into the steel only.
    - Ensure correct compression of the neoprene washer on each screw. (With the edge of neoprene appearing slightly compressed from the edge of the steel washer).

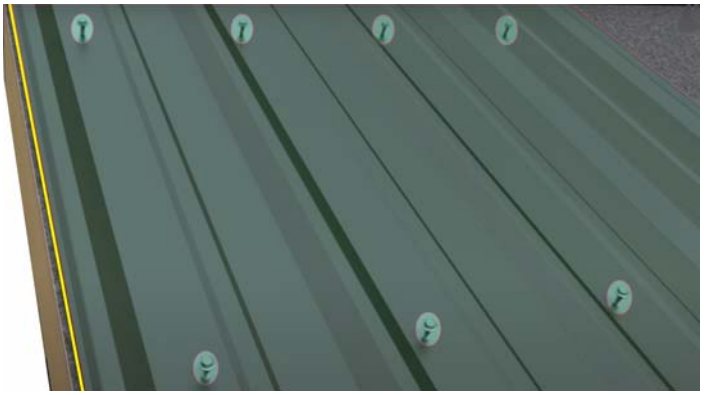


Figure 53. Attaching the Metal Roofing

15. Carefully align the bottom edge of the next metal sheet with the bottom edge of the previously attached metal sheet.

16. For the next metal sheet, lay the crown of the trailing (overlap) edge onto the leading edge (purlin bearer leg) of the previously attached metal sheet.

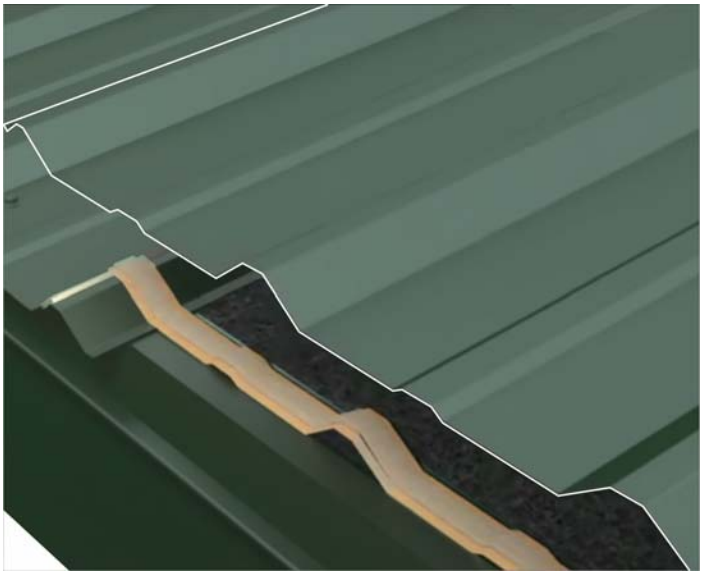


Figure 54. Aligning and Laying Second Sheet

17. Using 2-inch #10 gasketed hex drive screws, spaced accordingly along the overlapping crown, attach the new sheet to the previous sheet.

    - Ensure correct compression of the neoprene washer on each screw. (With the edge of neoprene appearing slightly compressed from the edge of the steel washer).

Figure 55. Attaching Overlapped Crown

18. Repeat Step 14 through Step 17 for each successive roofing panel.

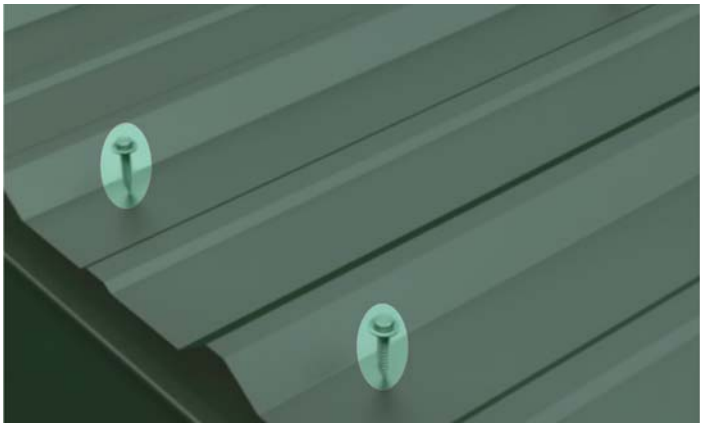


Figure 56. Attaching Roof Panel to Wood Decking

INSTALLING SIDE FASCIA

19. Pre-fit the metal side fascia over each side of the roof.

NOTE: The three (3) steps below are optional. The bottom (back) end of the side fascia can be folded and boxed as shown, or skip these three (3) steps and leave the sheet metal alone with the standard factory edge.

20. Cut (illustrated as red lines) and remove the waste pieces (illustrated in white coloration).

21. Fold the ends of the side Fascia (Illustrated as white lines) to cover the top and bottom ends of the metal roof sheets.

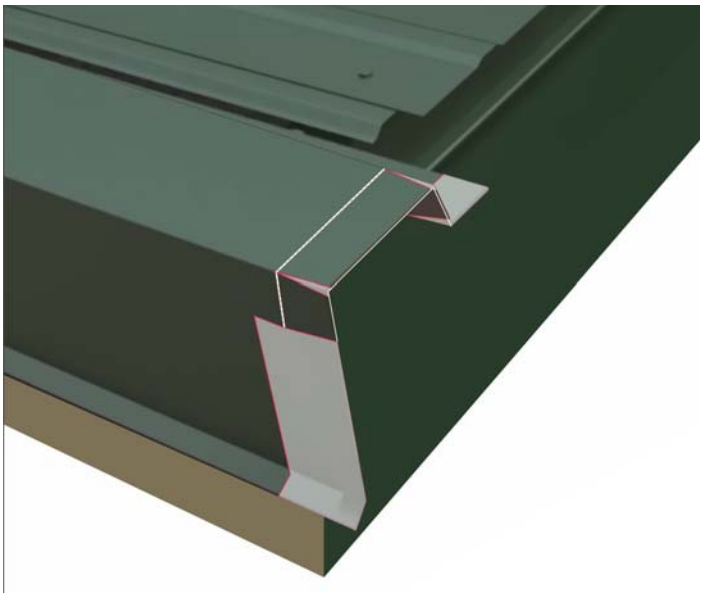


Figure 57. Cuts, Waste Pieces, and Folds Marked

22. Secure the fold with a rivet that will overlap the roof crown.

Figure 58. Ends Folded and Riveted

23. With the side fascia right-side up, carefully align and apply the side fascia down over the roof edge crown while simultaneously pressing the side of the metal fascia against the wood fascia.

24. Using 2-inch #10 gasketed hex drive screws, spaced accordingly, attach the lapped edge at the top of the side fascia down onto the metal roof sheet.

    - Ensure correct compression of the neoprene washer on each screw. (With the edge of neoprene appearing slightly compressed from the edge of the steel washer).

25. Using #8 x 1-1/4" T10 pan head screws, spaced accordingly, attach the overhanging portion of the metal side fascia to the wood fascia.

Figure 59. Attaching the Side Fascia

INSTALLING FRONT EDGE CAP

26. Remove the paper backing from the self-adhesive and apply a strip of polyethylene closure approximately 2" from the front edge.

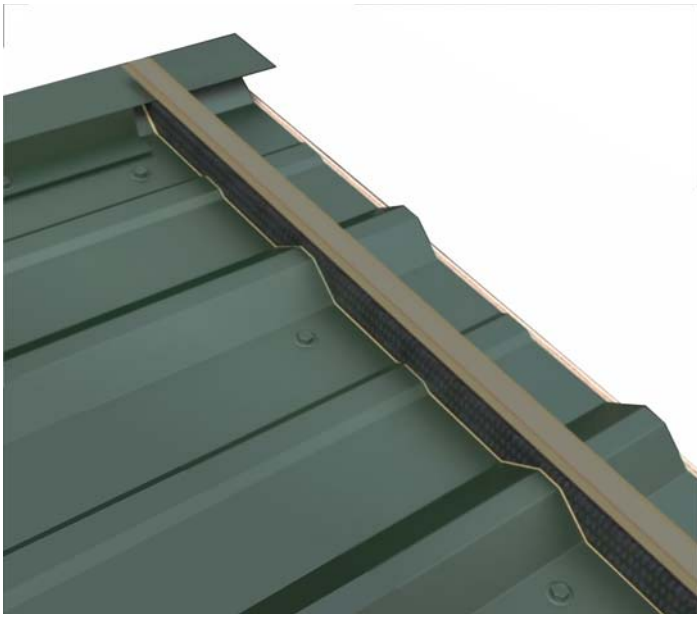


Figure 60. Applying Polyethylene Closure and Tape

27. Measure across the front fascia.
28. Mark the length to cut the front edge cap using a square.
29. Cut the front edge cap to length using a tin snip.
30. Apply the front edge cap down over the front edge of the roof while simultaneously pressing the front edge cap against the front wood fascia.
31. Attach the front edge cap to the crowns of the roofing metal using 2-inch #10 gasketed hex drive screws.
32. Cut off a 1” wide triangle relief from both ends of the front edge cap. See inset image in Figure 61.
33. Attach the under side of the front edge cap to the front wood fascia using #8 x 1-1/4” T10 pan head screws, spaced accordingly.
34. Orient one of the plastic corner caps with two (2) holes on the bottom and one (1) hole on the top.
35. Press-fit the plastic corner cap over one of the front corners of the roof.
36. Visually align the corner cap for best appearance.
37. Using the bottom of the corner cap as a template, make two (2) pilot holes in the metal fascia with a 1/8” drill bit.
38. Attach the bottom edge of the corner cap to the bottom edge of the roof corner using a T10 star drive and two (2) trim head screws- do not over tighten.
39. Visually align the corner cap to ensure it is straight and true with the roof.
40. Using the top of the corner cap as a template, make one (1) pilot hole in the metal fascia with the 1/8” drill bit.
41. Attach the top edge of the corner cap to the top roof corner using a 1/4” socket head drive and one (1) gasketed roofing screw.
42. Repeat Step 34 through Step 41 to attach the other corner cap.

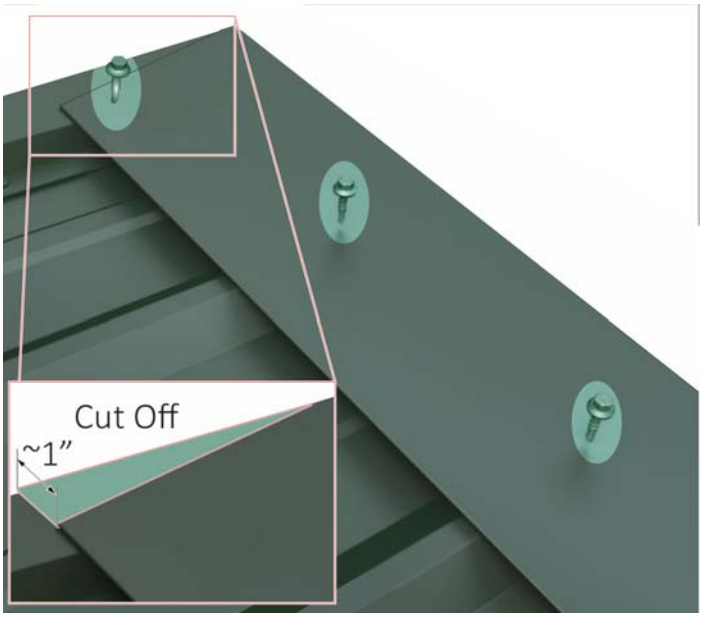


Figure 61. Attaching Front Edge Cap & Cutting Reliefs

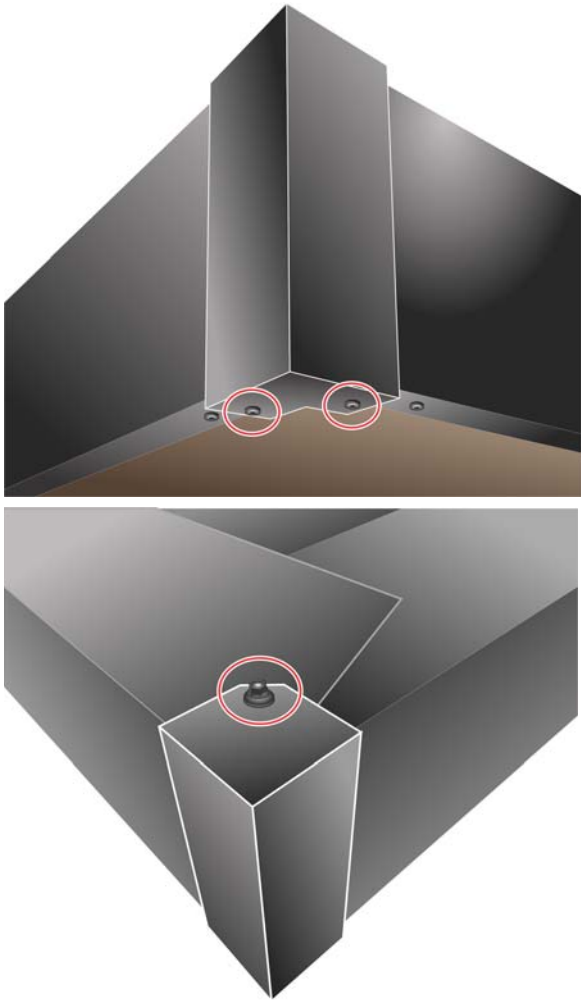


Figure 62. Attaching the Corner Caps

SECTION 8. CONTROL INSTALLATION

1. Using a flat blade screw driver, remove the glass touch screen from the plastic control casing. See Figure 63.
2. From the included parts, attach two (2) plastic “wings” to the two (2) mounting screws provided.
3. Pass the end of the RJ11 through the cable opening on the back of the plastic control casing.
4. Connect the RJ11 cable to the female RJ11 jack located on the back of the control.
5. Secure the plastic control casing into the roughed wall opening using the two (2) mounting screws with plastic wings.
6. Carefully re-attach the glass touch screen into the plastic control casing.
7. Route the other end of the RJ11 cable through an access hole located on the bottom of the CB Box.
8. Connect the RJ11 cable to the CN1 female RJ11 jack.

For instructions on operating the control, see “SECTION 9. OPERATING the CONTROL” on page 32.

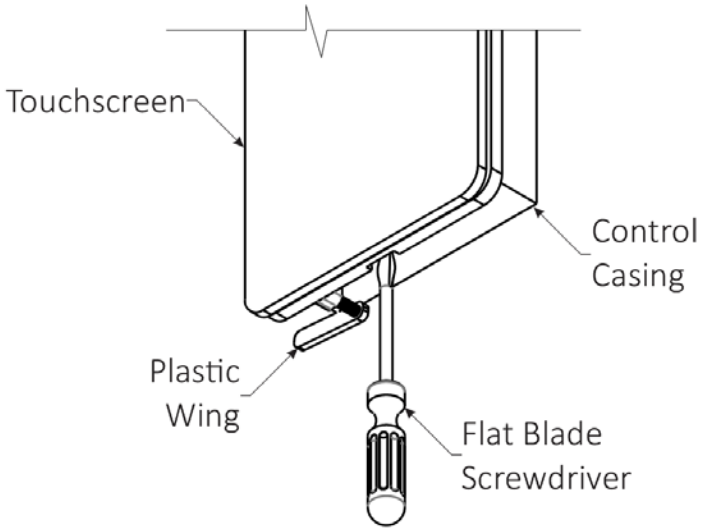


Figure 63. Removing the Touchscreen

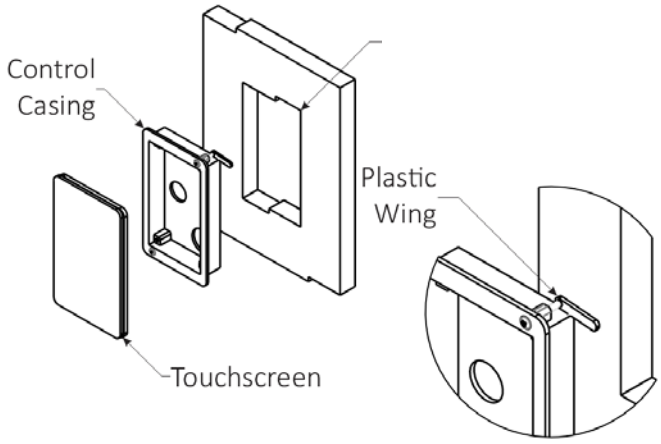


Figure 64. Roughing in the Control

SECTION 9. OPERATING the CONTROL

The instructions provided here are for operating a traditional sauna heater.

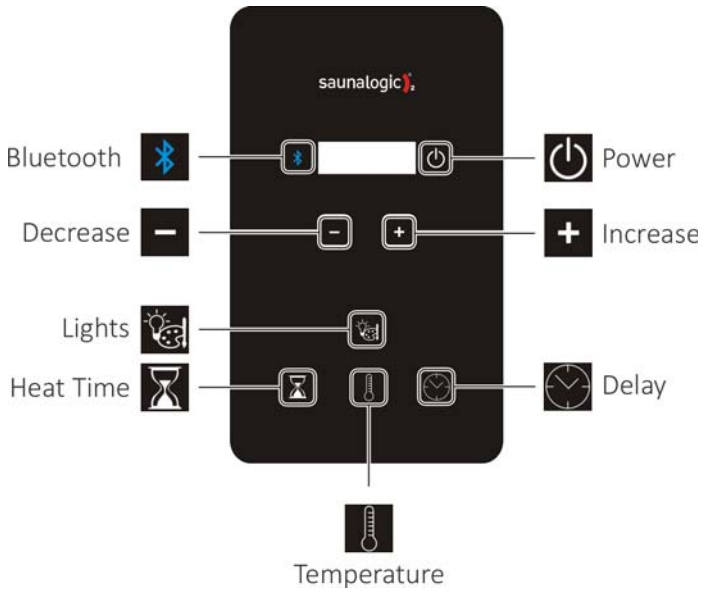


Figure 65. Control Icons

HEATER SELECTION

Press the **Power** icon once. The default settings for the temperature is 194°F, the bath time is 60 minutes. These settings are adjustable (as described below) from 119° to194°. Length of the sauna can be set from 0 to 60 minutes. The time delay before start can be up to 24 hours. Any changes are remembered by the heater for your next bath. Should the heater power be lost then restored, the settings will return to their default values.

SETTING DURATION and TEMPERATURE

Press the **Heat Time** icon for time, then press the **Increase** or **Decrease** icon to increase or decrease the amount of minutes to the desired setting. The maximum setting is 60 minutes.

Press the **Temperature** icon and then press the **Increase** or **Decrease** icon to increase or decrease the amount of heat to the desired setting. The maximum setting is 194°F (90°C).

PRE-SET DELAYED START

Press the **Delay** icon and delay time will appear in the display and will toggle between "**dlay**" and the amount of time remaining. The maximum amount of time is 24 hours. If no delay is desired, press the **Delay** icon again to toggle off the function.

LIGHTING OPERATION (Optional)

The SL2 control is capable of operating ONLY one (1) lighting package purchased with the system. Press the **Lights** icon to cycle through lighting options.

Sequence of colors are - White - Red - Green - Blue - Yellow - Aqua - Purple - Rotation of colors - Off.

Make a color choice, then set brightness. The brightness adjustment is available on the display for three (3) seconds. Press either the **Increase** or **Decrease** icon to increase or decrease the brightness. Brightness settings available are 25, 50, 75, and 100%.

Press and hold the **Lights** icon for three (3) seconds to turn off the light. Alternatively, the lights turn off automatically 10 minutes after completion of the sauna cycle.

BLUETOOTH (Optional)

The SL2 control is capable of operating **ONLY** a Bluetooth package purchased with the system. Press the **BlueTooth** icon to turn on or off the system.

SECTION 10. HIGH LIMIT CONTROL

This sauna heater is equipped with a built-in high limit control. Should the temperature inside the sauna room exceed the threshold of the high limit sensor, the high limit control will trip, thus turning off the heater.

When the high limit trips, the control displays "**HL**".

Figure 66. Display - High Limit Tripped

After temperature in the sauna room drops below the low temperature threshold, the high limit control automatically resets.

Press the **Power** icon on the control to resume operation of the sauna.

Figure 67. Control - Power Icon

NOTE: If the high limit control continually shuts off the heater, discontinue using the sauna and contact a service representative. Read "SECTION 15. TROUBLSHOOTING" on page 37 for further information.

SECTION 11. INSTALLING SAFETY PLACARDS

Three (3) metal safety placards are included inside the installation instruction envelope packaged with the sauna system.

Figure 68. Caution Placard

1. Position the CAUTION placard in plain sight on the interior wall directly above the sauna heater and attach with the two (2) screws provided.

WARNING
REDUCE THE RISK OF OVERHEATING
* Exit immediately if uncomfortable, dizzy, or sleepy. Staying too long in a sauna is capable of causing overheating.
* Supervise children at all times.
* Check with a doctor before use if pregnant, in poor health, or under medical care.
* Breathing heated air in conjunction with consumption of alcohol, drugs, or medication is capable of causing unconsciousness.

Figure 69. Warning Placard

2. Position the two (2) WARNING placards in plain sight on both sides of the doorway to the sauna.
3. Attach the placards using the eight (8) Screws provided, four (4) screws each.

SECTION 12. PLACING SAUNA ROCKS

The rocks supplied with the heater were selected with the best traditional sauna performance in mind.

HEAVY OBJECT: A full container of rocks is heavy. To avoid injury, bend at the knees when picking up the box.

- Use of other rock types may void heater warranty.
- **NEVER** operate heater without rocks in place!
- **RINSE** rocks with water before placing in the heater.

CAREFULLY place rocks loosely around the heater elements to allow efficient air circulation.

1. Remove the heater guard from the top of the heater.

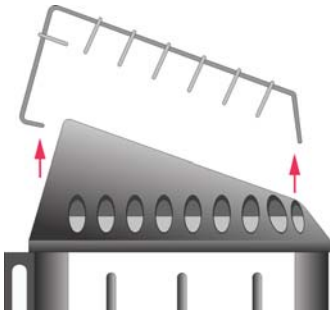


Figure 70. Removing Heater Guard

2. For the first layers, place smaller rocks around the outer perimeter of the heating elements.
3. Fill the middle sections with larger rocks.
4. Ensure the elements stay vertical while carefully filling the heater with rocks.
5. Place rocks loosely in the center of heater to allow heat to rise easily up the middle of heater.
6. Loosely cover the tops of all elements with rocks.

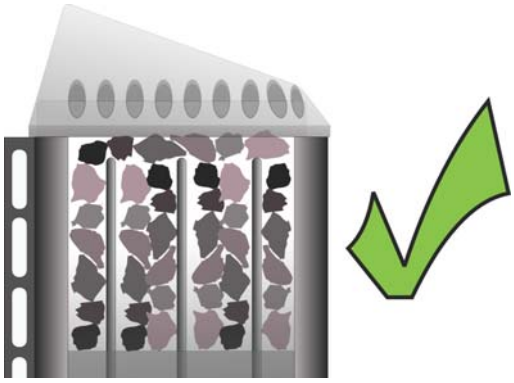


Figure 71. Placing Rocks on Top of Elements

7. Be careful not to pack the rocks too densely on top of the heater elements or between the heater elements as this can impede airflow.

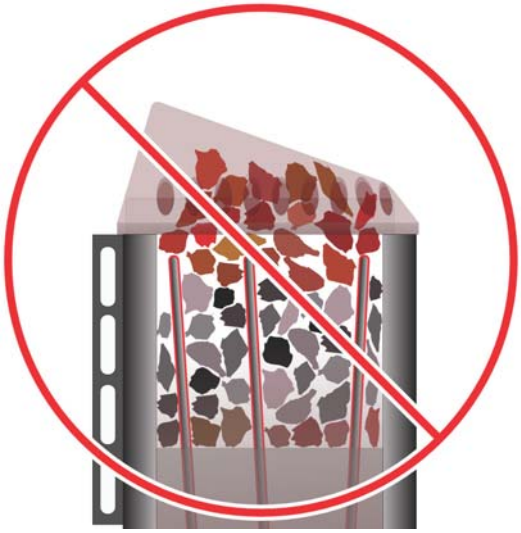
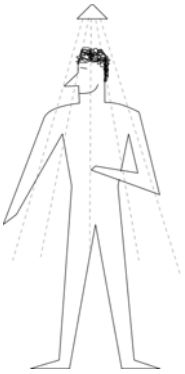


Figure 72. Do Not Pack Rocks Too Densely

8. Re-install the heater guard with the screws removed previously.

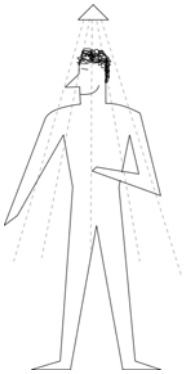
SECTION 13. HOW TO TAKE A SAUNA

- Devote adequate time to completely relax while taking a sauna bath.
- Remove clothing and jewelry. Apply a towel loosely about the body.
    - To enjoy the soothing effect of steam, splash a small amount of water onto the heated sauna rock.
    - Use one dipper full (approximately 1/2 cup) of clean water at a time, keeping exposed skin clear of the steam as it rises off the rocks.
    - **DO NOT** use chlorinated pool or spa water, as corrosion damage may result.
    - **DO NOT** smoke, exercise or drink alcoholic beverages while in the sauna room.
- After ten (10) minutes or when perspiration begins, exit from the sauna, relax in the dressing area, followed by a cool shower.
- Stay hydrated, drinking water is best.
- The allotted cool down time should equal the amount of time occupying the sauna.
- Step back into the sauna room and remain for five (5) or ten (10) minutes.
- Repeat the cycle two (2) or three (3) more times. End with a brisk shower, rinsing in cool water.
- Put on clothing only when perspiration has stopped and the body is completely dry.



Shower

Sauna Bathe



Shower

Rest/Relax

Hydrate

SECTION 14. MAINTENANCE

Inspect sauna room at the end of each day the room to ensure the control and system is off.

The sauna, like a bathroom, should be kept clean and odor free. Towels or mats should always be used on benches and floor as perspiration otherwise penetrates the soft wood. To clean and remove perspiration stains, use soap or detergent in warm water, best applied with a scrub brush. Badly soiled surfaces may require sanding. Sand paper wrapped around a wooden block works well.

Air out the sauna often by keeping the door and vents open when the sauna is not in use. Saunas that are in daily use should be washed down at least once a week to keep them clean and the air fresh. Duck board should be removed from the sauna, the sauna floor mopped and dried in a conventional manner, and the duck board thoroughly scrubbed and dried before returning to the sauna room. The sauna heater should be wiped down occasionally with a damp cloth to remove lint and dust. The rocks should be removed once a year for cleaning and small or crumbled rocks replaced.

Benches and supporting structure must be inspected annually for potential deterioration due to age, dry rot or abuse. Any boards with signs of deteriorations should be replaced immediately to avoid possible injury.

SECTION 15. TROUBLSHOOTING

If control displays "**Sn**" it means no sensor is connected.

If control displays "**HL**" it means the high limit is open.

System won't start to heat, ensure the system is not in the delay mode. If "**dLAY**" is flashing in the display window, the system is in the delay mode.

If control displays "**JP**" it means the jumper is open on the main board in the CB Box. Verify jumper is installed in CN6 location on the main board. If it is open, close the two pins.

If control acts erratically or buttons turn on and off by itself during startup. Turn power off at the circuit breaker, place the glass on the control and turn power back on the system. The control will automatically reset the sensitivity of the capacitive switches.

Please contact your local dealer or outlet you purchased your product for questions and support. Prior to calling, please have the Model and Type number available.

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